CLAIMS:

1. A method for preparing a radially anisotropic annular sintered magnet, comprising the steps of using an annular magnet compacting mold in which a core is at least partially made of a ferromagnetic material having a saturation magnetic flux density of at least 0.5 T, charging a mold cavity with a magnet powder, compacting the magnet powder while applying an orienting magnetic field according to the vertical compacting in horizontal magnetic field process, and sintering the resulting compact, characterized in that the method includes at least one of operations (i) to (iii) of:

(i) once applying a magnetic field, rotating the magnet powder an angle of 90° in a circumferential direction of the mold, and then applying a magnetic field again;

(ii) once applying a magnetic field, rotating the magnetic field-generating coils an angle of 90° in a circumferential direction of the mold and relative to the magnet powder, and then applying a magnetic field again; and

(iii) disposing two sets of magnetic field-generating coil pairs so as to surround the periphery of a mold and such that the directions of applied magnetic fields associated with the coil pairs are orthogonal with each other, applying a magnetic field with one coil pair, and then applying a magnetic field with the other coil pair,

thereby producing a radially anisotropic annular sintered magnet having a remanence, in which the remanence in a radial direction of the annulus increases and decreases at intervals of 90° in a circumferential direction of the annulus, and the remanence in a radial direction over the entire circumference of the annulus has a maximum of 0.95 to 1.60 T and a minimum equal to 50 to 95% of the maximum.

2. A method for preparing a radially anisotropic annular sintered magnet according to claim 1, wherein the magnetic field to be applied to the magnet powder during the one operation immediately before compaction or during compaction has a strength of $1.25\times10^5/\pi$ to $2\times10^6/\pi$ A/m.

3. A method for preparing an annular multi-pole magnet for a permanent magnet motor, comprising magnetizing the radially anisotropic annular sintered magnet prepared by the method of claim 1 or 2 in 4n poles (wherein n is an integer of 1 to 20) so that the boundary between N and S poles is located within the range that is centered at the radial direction where the remanence exhibits the minimum and extends ±10° therefrom in a circumferential direction.